

WHAT IS CLAIMED IS:

1. A bearing apparatus of sealing type, comprising:  
an inner race dividable in an axial direction;  
an outer race dividable in the axial direction;  
5 tapered rollers in four rows rotatably disposed between  
the inner race and the outer race; and

a sealing device for sealing a space between the inner  
race and the outer race; the sealing device having a sealing  
body,

10 wherein, when the inner race rotates at low speed, the  
sealing body serves as a contacting seal, and

when the inner race rotates at high speed, the sealing  
body serves as a non-contacting seal or reduces a contacting  
pressure due to deformation thereof by a centrifugal force.

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2. The bearing apparatus as set forth in claim 1,  
wherein the sealing device further includes:

an outer race member; and

an inner race member encircled by the outer race member,

20 and

a labyrinth seal is formed between the outer race member  
and the inner race member.

3. The bearing apparatus as set forth in claim 1,  
25 wherein the sealing device further includes:

an outer race member; and  
an inner race member encircled by the outer race member,  
and  
a labyrinth seal is formed between the outer race member  
5 and the sealing body.

4. The bearing apparatus as set forth in claim 1,  
wherein the sealing device further includes:  
the outer race member; and  
10 the inner race member encircled by the outer race member,  
and  
the outer race member is furnished with a drain passage.

5. The bearing apparatus as set forth in claim 1,  
15 wherein the sealing device further includes:  
the outer race member; and  
the inner race member encircled by the outer race member,  
and  
the outer race member is defined with a circumferential  
20 groove in a bearing outside edge thereof.

6. The bearing apparatus as set forth in claim 1,  
wherein the sealing device further includes an outer race  
member having a sealing face part extending in the  
25 circumferential direction, and

the sealing face part is formed in a cylindrical shape.

7. A bearing apparatus of sealing type, comprising  
an inner race;

5 an outer race;

rolling elements rotatably disposed between the inner  
race and the outer race; and

a sealing device for sealing a space between the inner  
race and the outer race, the sealing device including:

10 an outer race member;

an inner race member encircled by the outer race  
member; and

a sealing member furnished between the inner  
member and the outer member, the sealing member having:

15 a sealing body attached to the inner race  
member; and

a sealing face part disposed on the outer  
race member,

wherein, when the inner race member is rotated at a  
20 predetermined speed or lower, the sealing body contacts the  
sealing face part, and

when the inner race member is rotated at a speed more  
than a predetermined speed, the sealing body reduces the  
contacting pressure to the sealing face part, or separates from  
25 the sealing face part such as to form a non-contacting seal

in conjunction with the sealing face part.

8. The bearing apparatus as set forth in claim 7,  
wherein a labyrinth seal is formed between the outer race member  
5 and the inner race member.

9. The bearing apparatus as set forth in claim 7,  
wherein a labyrinth seal is formed between the outer race member  
and the sealing body.  
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10. The bearing apparatus as set forth in claim 7,  
wherein the inner race member includes: a ring-shaped sleeve,  
a substantially disk-shaped holder and a core metal, and  
the sealing body is adhered to the core metal and fitted  
15 into the holder with a tightening margin.

11. The bearing apparatus as set forth in claim 7,  
wherein the outer race member is formed with a drain passage.

20 12. The bearing apparatus as set forth in claim 7,  
wherein the outer race member is defined with a circumferential  
groove in a bearing outside edge thereof.

13. The bearing apparatus as set forth in claim 7,  
25 wherein the sealing face part is formed in a cylindrical shape.

14. The bearing apparatus as set forth in claim 7,  
wherein the sealing body is positioned at a side of an interior  
space of the bearing with respect to the sealing face part.

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15. The bearing apparatus as set forth in claim 7,  
wherein the sealing body is disposed to at least partially  
extend in an axial direction of the bearing such as to generate  
to the sealing body a centrifugal force for reducing the  
10 contacting pressure of the sealing body to the sealing face  
part, when the inner race member is rotated.

16. A bearing apparatus of sealing type, comprising:  
an inner race having a holding face;  
15 an outer race;  
rolling elements rotatably arranged between the inner  
race and the outer race;  
a sealing device for sealing a space between the inner  
race and the outer race, the sealing device having a sealing  
20 body; and

a holding member fitted to the holding face of the inner  
race for detachably holding the sealing body.

17. The bearing apparatus as set forth in claim 16,  
25 wherein the holding member is a ring-shaped sleeve.

18. The bearing apparatus as set forth in claim 16, wherein the holding member is a substantially disk-shaped holder.

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